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# SARCOMA OF THE KIDNEY AND ITS TREATMENT

*Delivered before the Students of the Yorkshire College*

*July, 1895*

BY

A. W. MAYO ROBSON, F.R.C.S.

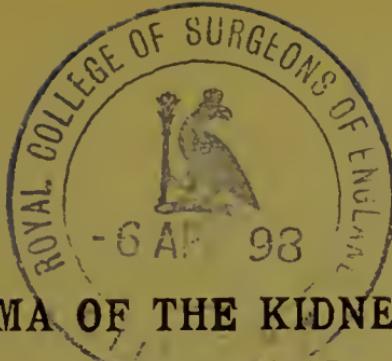
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Reprinted from

"THE CLINICAL JOURNAL," December 11, 1895





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GENTLEMEN,—I have at present under my care two cases of sarcoma of the kidney, one in No. 10 ward in a child of five, now convalescent from nephrectomy, whose photograph I show you; another in No. 5 ward, under the care of my colleague, Dr. Barrs, recovering from an exploratory abdominal section, only however to die later from the disease, which is irremovable.

The notes of the cases which have been furnished by my house-surgeon, Mr. Robinson, are as follows:—

*Case 1.* G. B., aged 5, was admitted on June 17th for a swelling in the right lumbar region, presenting the characters of a kidney tumour. The swelling had been noticed for a year, and had been gradually and painlessly increasing in size.

There was no history of injury or tubercle and no alteration in the amount or character of the urine could be found.

Operation on June 20th, 1895, by an incision



Case 1, G. B., aged 5 (Fig. 1).

from the tip of the last rib to the crest of the ilium, opening the peritoneum, which was then stripped off the front of the kidney, the colon being carried inward with its peritoneal covering. The peri-

toneum was then closed by a continuous catgut suture, and the kidney brought to the surface, after ligaturing some attachments in the suprarenal region.

The ureter was found to be thickened ; and after ligaturing the renal vessels, it was stripped from the peritoneum nearly to the bladder before being divided, as a wormlike portion of the tumour was found to be passing into it from the pelvis of the kidney. This is shown in the photograph of the tumour.

The cavity was well washed out, a drainage tube put through a small counter-opening in the loin, and the wound sutured in layers. The tube was removed on the third day, and the stitches were taken out a week after the operation, when the wound was found healed.

The annexed photograph was taken after operation, before the child left the hospital.

After note.—Seen on September 5th, and again on October 19th, in good health. No sign of recurrence.

*Case 2.* F. A., aged 18, a groom, was admitted under the care of Dr. Barrs on June 20th, 1895, for swelling of the abdomen and general weakness. The illness began without apparent cause early in May, 1895, with pain across the stomach and vomiting, but there were no symptoms pointing to the kidney being the seat of the disease, and there was no alteration in the quantity or quality of the

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Case 1, G. B., aged 5 (Fig. 2).

urine. He then for the first time noticed the swelling on the right side of the body, but after a week in bed he improved a little, though the swelling rapidly increased in size.

He was admitted on June 20th with an enormous semi-fluctuating and very tense tumour, occupying not only the left loin and left half of the abdomen, but reaching across the middle line. The extremely rapid increase of the tumour had caused such great tension that not only was the pain severe but the chest movements were impeded, and the breathing was considerably interfered with. The diagnosis rested between rapidly growing sarcoma and acute inflammatory trouble with deep suppuration. After consultation, an exploratory operation was decided on, in the hope of being able to relieve tension even if nothing more could be done.

On June 27th, an exploratory operation was performed through an incision of three inches, in a line vertically with the tip of the eleventh rib; the peritoneum was opened, and the compressed and empty colon found crossing the tumour. The peritoneum and colon were stripped off the front of the tumour and pushed inwards a little, the opening in the peritoneum being then closed by a continuous suture. The tense tumour was then incised, and a quantity of broken down growth and blood-clot evacuated, a drainage tube being left in.

As there was much infiltration of the neighbouring tissues, any further operative measures were impracticable, and the wound beyond the drainage tube was closed by silkworm gut sutures.

Thus far the patient has been very distinctly relieved by the operation, and he is much more comfortable, though unfortunately we know the relief can only be short-lived, as a microscopic examination of the portion removed shows the growth to be a mixed round and spindle-celled sarcoma.

After note.—The tumour continued to increase, and the patient died suddenly on July 23rd, a month after the exploratory operation, which had not only given him relief, but had probably prolonged his life.

The disease in question affects specially two periods of life, the very young and adults after middle age, the clinical character and the structure of the tumour differing somewhat in each case ; but although there is a proneness in infancy and in adult age, the case in No. 5 shows, if such proof were required, that the intermediate periods are not exempt.

Infantile sarcomata usually occur during the first seven years, and their growth is very rapid. The whole organ is generally involved, and, as in the present case, the suprarenal body may participate in the morbid process.

At first the organ retains its shape, and as there

is little or no tenderness, the normal kidney outline can generally be made out by palpation. In this stage the growth is encapsulated, though in the later stages the surrounding tissues become infiltrated, as is well shown in the extremely acute case in No. 5 ward.

Hæmaturia seldom occurs, and in fact there is, as a rule, no alteration in the urine which would point to the serious nature of the disease in the kidney.

In these cases only one kidney has been attacked by the disease, but it is not uncommon, in the infantile form, for both to be affected.

Unlike some other enlargements of the kidney, this is painless; and in fact, beyond the steady growth of the tumour, and the gradual loss of flesh and strength of the patient, there are few symptoms to chronicle.

Thus you will see that the diagnosis has to be made from the physical signs, and, as a rule, the patient is only seen by the medical man when they are fairly well marked.

There will be a distinct tumour in one or the other side of the abdomen, which on bi-manual examination will be felt to extend into the loin, and to be capable of being pushed forward; it will at first be freely movable, and will descend when the patient is told to take a deep breath, though it may soon become too fixed to move on respiration.

There will be dulness on percussion in the loin as well as over the anterior surface of the swelling if the tumour be a large one, but as the colon passes in front of the tumour the degree of resonance will vary, according to the presence or absence of gas in the large intestine. In large tumours, as in the one in No. 5, the colon is so compressed that the whole anterior surface is dull, whereas as shown in the case in No. 10, where the tumour was much smaller, the whole anterior surface was resonant. The contour of the kidney can usually be felt at first, and very frequently palpation will enable you to feel the rounded upper and lower ends of the swelling which will guide you in differentiating between a tumour of the liver and gall bladder or spleen above or any pelvic tumour below. Rectal or vaginal examination for the purpose of ascertaining the condition of the ureter will, as a rule in the earlier stages, give no information, but you will remember that in the case from No. 10, a worm-like process of the tumour had passed down the ureter almost to the bladder, so that here we might have obtained signs of ureteral enlargement.

These tumours may attain a great size, and though at first encapsulated, when they have gone beyond their capsule, they increase at an enormous rate and infiltrate extensively the neighbouring tissues. For instance, the case in No. 5 has attained an enormous size within a few weeks,

partly due to growth and infiltration, but chiefly owing to haemorrhages into the substance of the tumour.

I have operated on a sarcoma of the kidney in an adult, where the tumour was simply formed by one large sac with thick walls, the cavity being filled with broken-down clot and softened sarcoma.

These growths are composed of round and spindle-shaped cells in which tubules occur, and not infrequently striped muscle cells are interspersed, the tumour being then termed a myo-sarcoma or a rhabdo-myo-sarcoma. The progress of the disease is toward an inevitably fatal termination, though this is much more rapid in renal sarcoma in the infantile than in the adult variety.

In adults supra-renal tumours are not infrequently confused with kidney tumour. Some time ago I removed a large sarcoma which at the time I thought was renal, but afterwards the true kidney was found at its lower part almost enveloped in the sarcoma, which was of supra-renal origin. The patient, a lady of about 50, recovered from the operation, to die of a recurrence "in loco" a few months later. Sometimes these supra-renal tumours attain an enormous size; one removed by Mr. Thornton weighed 20 lbs., and the patient recovered and was well a year after. True sarcoma of the kidney in adults is usually composed of spindle cells. The disease is uni-

lateral and most common between 30 and 50. Haematuria is frequent, and the passage of clots gives rise to pain as does the loss of blood to anaemia. The duration is longer than in the infantile form of the disease, and death usually occurs from exhaustion or anaemia.

The diagnosis of enlarged kidney in the right side has especially to be made from tumour of the gall bladder. The following points are worth bearing in mind.

(a) Both an enlarged gall bladder and a normal or an enlarged kidney may produce a movable abdominal tumour.

(b) The history of an attack of jaundice is worth bearing in mind, though its absence does not disprove gall bladder enlargement.

(c) While an enlarged gall bladder can invariably be felt, a movable kidney unless enlarged cannot always be discovered.

(d) An enlarged gall bladder is easily felt on pressure in front, a kidney on bi-manual pressure.

(e) Both may vary in size, but diminution in a kidney tumour may be sudden and followed by a marked increase of urine voided.

(f) An enlarged gall bladder is as a rule very tense, hard, and pear-shaped. A kidney tumour is softer, and often presents the characteristic notch on its inner side.

(g) The movements of a gall bladder take place in the arc of a circle, the centre of which is

a point beneath the right lobe of the liver, whereas a movable kidney has a wider range of motion.

(h) A movable kidney can be pushed down towards the pelvis and slips back beneath the palpating hand into its lumbar bed; a gall bladder moves with respiration, and not independently of the liver, in a vertical direction.

(i) Where the gall bladder is enlarged, the kidney can usually be grasped independently.

Having made your diagnosis, there are only two lines of treatment to consider: (1) General and palliative, which will consist in relieving symptoms as they arise, and (2) radical or operative, with a view to respite or cure.

In considering nephrectomy, unless the tumour be small I would not advise the lumbar operation on account of the want of room, nor would I advise the median incision or Langenbuch's in the linea-semilunares.

The operation, which you have seen me perform on several occasions, is through a ventral incision from the tip of the tenth rib towards the anterior superior spine of the ilium, or a little external to that; this opens the peritoneum just in front of the cul-de-sac, and enables you to ascertain the extent of the tumour and its attachments, after which the peritoneal opening is closed by a continuous suture; the peritoneal sac is then easily displaced

inwards, carrying the colon with it, and enucleation is proceeded with as described in case 1.

In case of oozing from small vessels, a drainage tube is easily passed through a small lumbar opening, as in case 1.

The whole operation can be done very quickly, as the parts are well under observation.

In several of the text-books, notably in Mr. Bland Sutton's work on Tumours, nephrectomy in infantile sarcoma is spoken of as a useless procedure, first, because of the immediately fatal results of the operation, and secondly, because in those that recover from the operation, recurrence of the disease takes place within the year.

This is almost the truth, but not quite accurate. There have been cases operated on within this hospital where the disease has never recurred: in one case the child is living and well six years after.

Now, if we can save but a few cases, say, 5 per cent., it makes operation well worth pursuing, since nothing but nephrectomy gives the smallest hope of success; and seeing that the operation in the greater number of cases is followed by recovery and a more or less prolonged respite, I think it is our duty to place the exact facts before the patients' friends, and to be prepared and willing to operate if they elect to accept the risk in the hope of a slight chance of permanent cure.

LONDON :  
PRINTED BY GILBERT AND RIVINGTON, LTD.,  
ST. JOHN'S HOUSE, CLERKENWELL ROAD, E.C.

